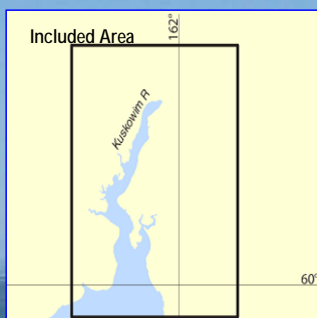


BookletChart™

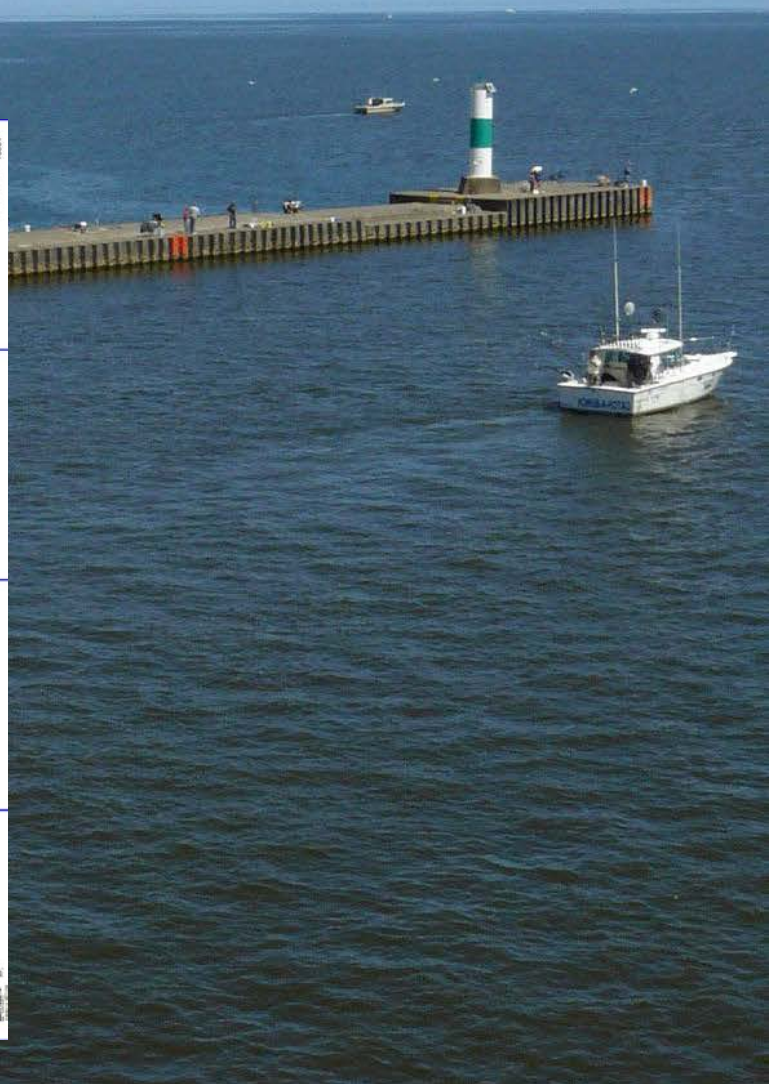
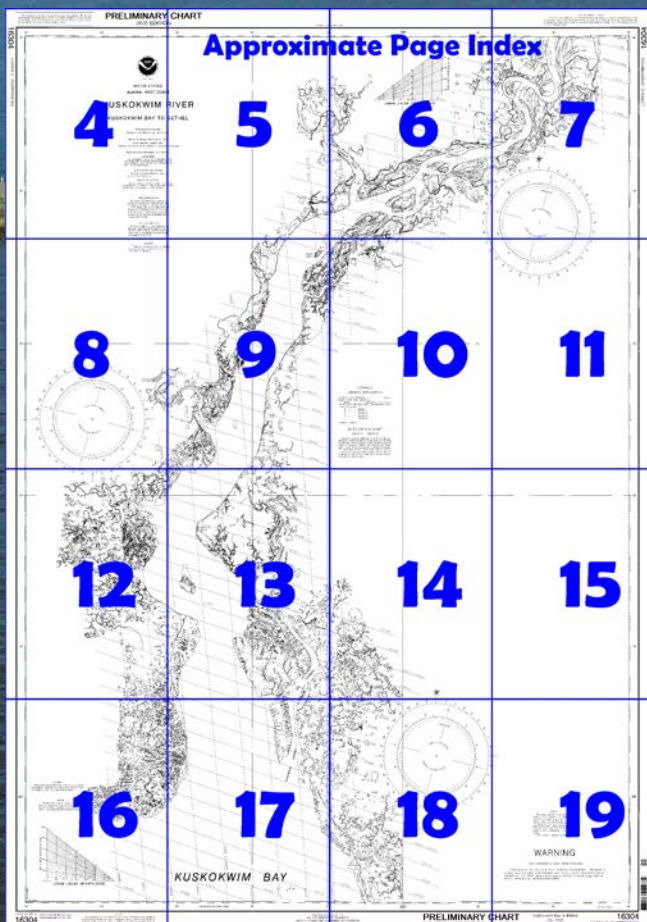


Kuskokwim River – Kuskokwim Bay to Bethel **NOAA Chart 16304**

A reduced-scale NOAA nautical chart for small boaters
When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/coastpilot_w.php?book=9.



(Selected Excerpts from Coast Pilot)

Kuskokwim Bay and Kuskokwim River open into the Bering Sea N of the entrance to Bristol Bay. The bay, filled with many flats, and hard steep-to shoals, is entered between Cape Newenham and **Cape Avinof**, 93 miles NW.

The channels through the bay are not always apparent by the surface indications of the water. At times the channels will be smooth with rips on the shoals, and at other times the reverse will be true. The

edges of the channels are often marked by long lines of foam, but occasionally the foam extends across the channels; it is well to approach these lines with caution. Navigation is recommended only at low water, when the mudflats are visible, enabling the channels between them to

be followed. Because of the inequality of the tides, a vessel grounding at high water may not be refloated for several days.

The 40-mile approach through **Eek Channel** to Kuskokwim River is a maze of shifting sandbars, both visible and covered, and blind channels. The channels in the bay and river undergo constant change from year to year, because of the action of the sea, currents, and ice; extreme caution and continuous soundings are necessary.

The procedure usually followed is for a small pilot boat from Goodnews Bay to precede the vessel through these waters, constantly feeling out the channels and sounding.

During S storms a heavy sea makes up the bay nearly to Eek Island, at the head of the bay, and vessels caught on a shoal are in danger of breaking up.

The channel through Kuskokwim Bay and up Kuskokwim River to Bethel is marked by seasonal buoys. The markers above Kuskokwim River Buoy 12 are oil drums that are set to mark the best water. The deepest draft that should attempt to reach Bethel is about 15 feet.

Caution.—In 1983, the Coast Guard reported that as a result of flooding in the area, about 20 ocean shipping containers were washed into the Kuskokwim River from the riverbank at the village of Napakiak, about 12 miles SW of Bethel. Reports indicate that several of the containers sank in the river near the village, and the remainder of the containers were carried downriver and sank. Mariners are advised to exercise caution in navigating Kuskokwim Bay and River.

Cape Newenham is the landfall for this region, and can be approached close-to with deep water. It is the end of a peninsula formed by a series of rough sawtoothed mountains. These mountains terminate in a level plateau that forms the immediate cape. In S weather a heavy sea and tide rips occur off Cape Newenham. In 1981, during heavy N winds, the NOAA Ship MILLER FREEMAN found a good anchorage in a small cove on the S side of the cape about 0.4 mile offshore S of Jagged Mountain in 10 fathoms, sand and mud bottom. Satisfactory anchorage for S or E weather can be had in about 8 fathoms off the small cove on the N side of the cape and about 3.5 miles from its outer end. An aero radiobeacon (58°39.4'N., 162°04.4'W.) is shown from the N side about 3 miles E from the outer end of the cape. About 1.3 miles ESE of the aero radiobeacon is a parabolic antenna.

Cape Newenham is an important resting area (haulout) for Pacific walrus and nesting area for seabirds. Operating a watercraft in a manner which results in disturbing, harassing, herding, hazing or driving of walrus is prohibited under provisions of the Marine Mammal Protection Act. To ensure that walrus are not disturbed, marine vessel operators are requested to avoid transiting or anchoring within 0.5 mile of the Cape Newenham walrus haulout.

Security Cove, 9 miles ENE of Cape Newenham, is a good anchorage except with NW winds; the usual summer gales are SE. The bottom is even and shoals gradually. The best anchorage in 3½ fathoms, mud bottom, is about 0.8 mile NE of Castle Rock and on the range of Castle Rock and the first promontory SW. Water can be obtained from a stream which enters the cove. There is also good anchorage in 2 fathoms with good holding ground in the middle of the bight on the SW side of Castle Rock. This anchorage is less affected by the ground swell making along the coast from Cape Newenham than the anchorage in Security Cove.

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Juneau	Commander	
	17th CG District	(907) 463-2000
	Juneau, Alaska	

Table of Selected Chart Notes

Corrected through NM Jan. 15/05
Corrected through LNM Jan. 4/05

For Symbols and Abbreviations, see Chart No 1.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

AUTHORITIES

No hydrographic information is depicted on this preliminary chart. Topography collected and compiled by the National Ocean Service, with additional data from the U.S. Coast Guard.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers.

AIDS TO NAVIGATION

Consult Office of the Commander, 17th Coast Guard District in Juneau, Alaska for supplemental information concerning aids to navigation.

NOTE B

The deep draft channel from Kuskokwim Bay Buoy 12 (59°53'42"N, 162°15'22"W) northward to Johnson River is marked by about 30 red or green oil drum buoys during the season of navigation.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 2.739" southward and 8.225" westward to agree with this chart.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

LORAN-C

GENERAL EXPLANATION

LORAN-C FREQUENCY.....100kHz

PULSE REPETITION INTERVAL

9990.....99,900 Microseconds

STATION TYPE DESIGNATORS: (Not individual station letter designators).

M.....Master

W.....Secondary

X.....Secondary

Y.....Secondary

Z.....Secondary

EXAMPLE: 9990-Y

RATES ON THIS CHART

9990-Y 9990-Z

Loran-C correction tables published by the National Geospatial-Intelligence Agency or others should not be used with this chart. The lines of position shown have been adjusted based on theoretically determined overland signal propagation delays. They have not been verified by comparison with survey data. Every effort has been made to meet the ¼ nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned not to rely solely on the lattices in inshore waters.

WARNING

PRELIMINARY CHART 2005 EDITION

Hydrography for this preliminary chart is not available. Navigators should use this chart with extreme caution and report discrepancies or hazards to the Chief, Marine chart Division N/CS2, National Ocean Service NOAA, Silver Spring, Maryland 20910-3282.

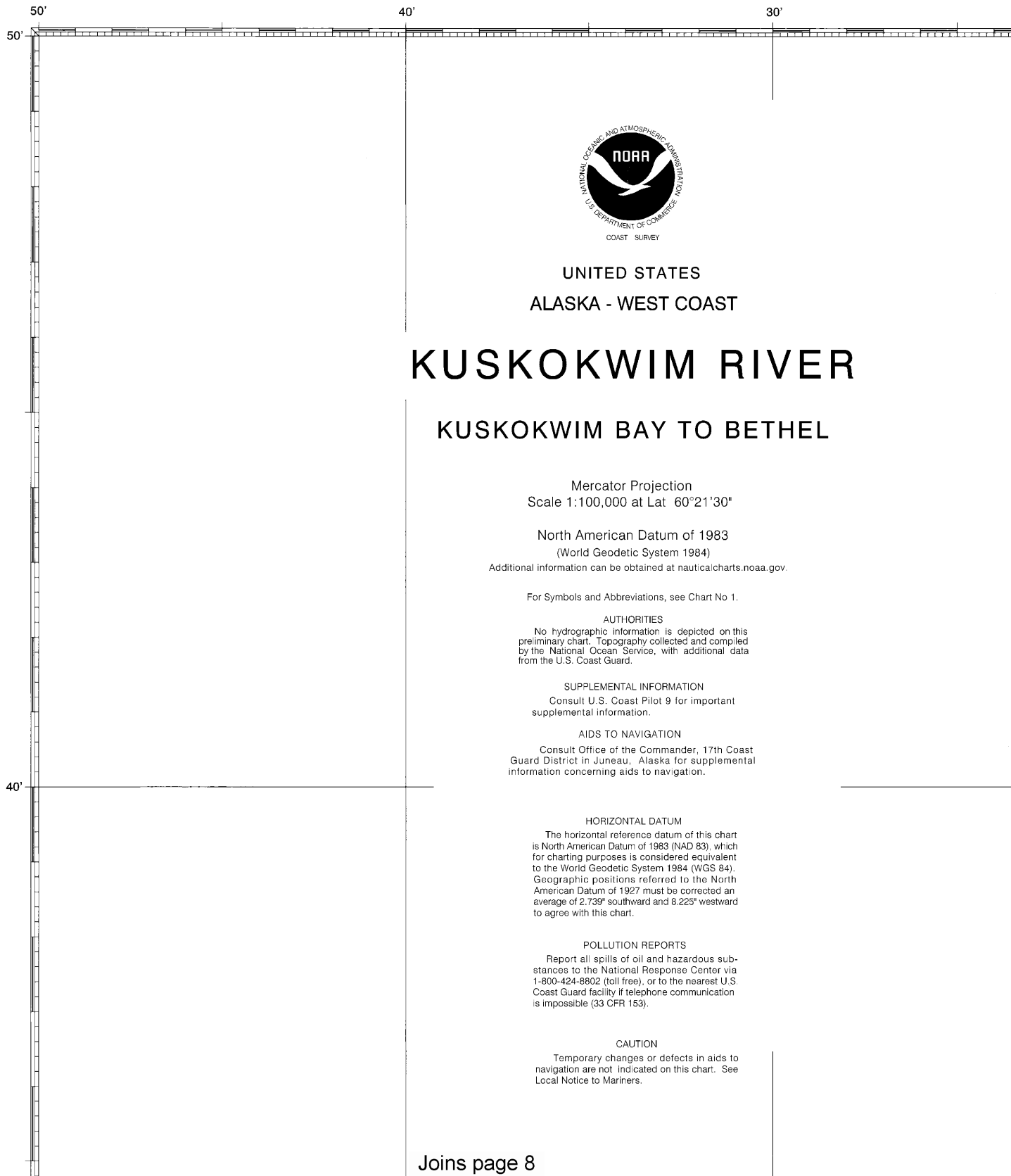
This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

PRELIMINARY CHART

2005 EDITION

16304

LORAN-C OVERPRINTED



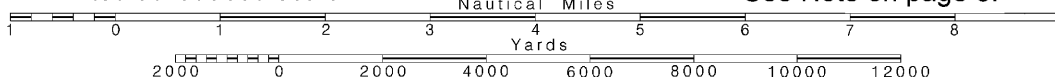
4

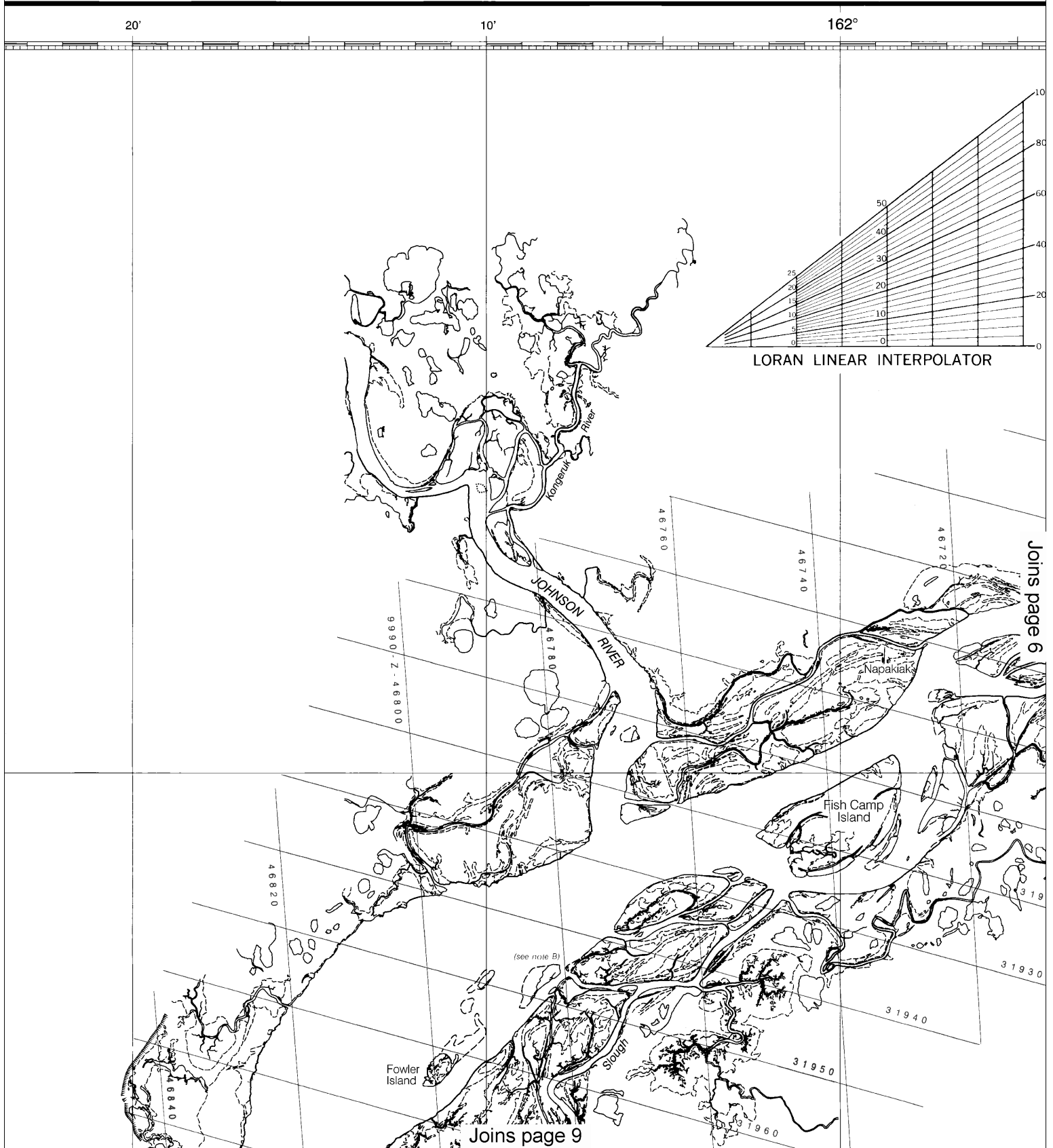
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:100,000

See Note on page 5.



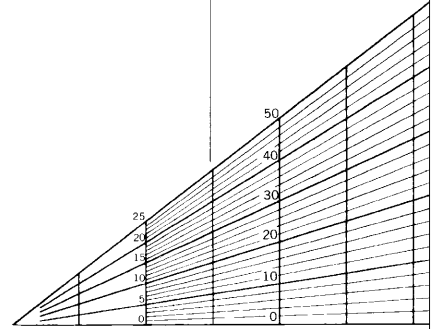


This BookletChart was reduced to 75% of the original chart scale.
 The new scale is 1:133333. Barscales have also been reduced and
 are accurate when used to measure distances in this BookletChart.

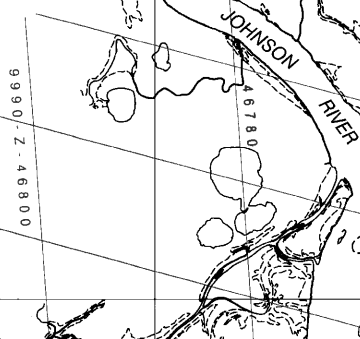
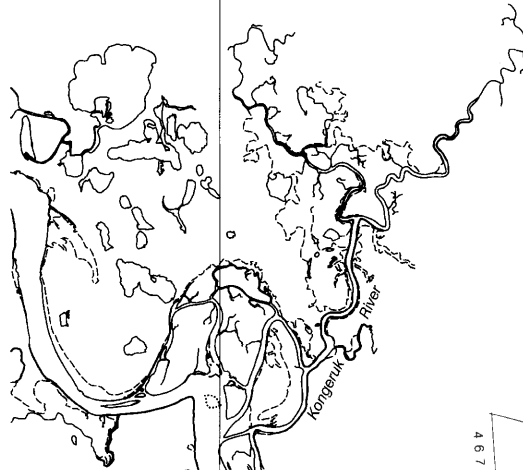
20'

10'

162°



LORAN LINEAR INTERPOLATOR



Joins page 10

Joins page 5

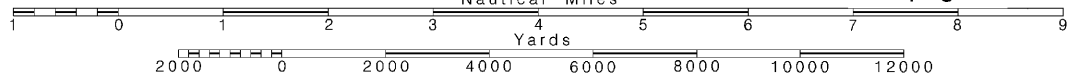
6

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

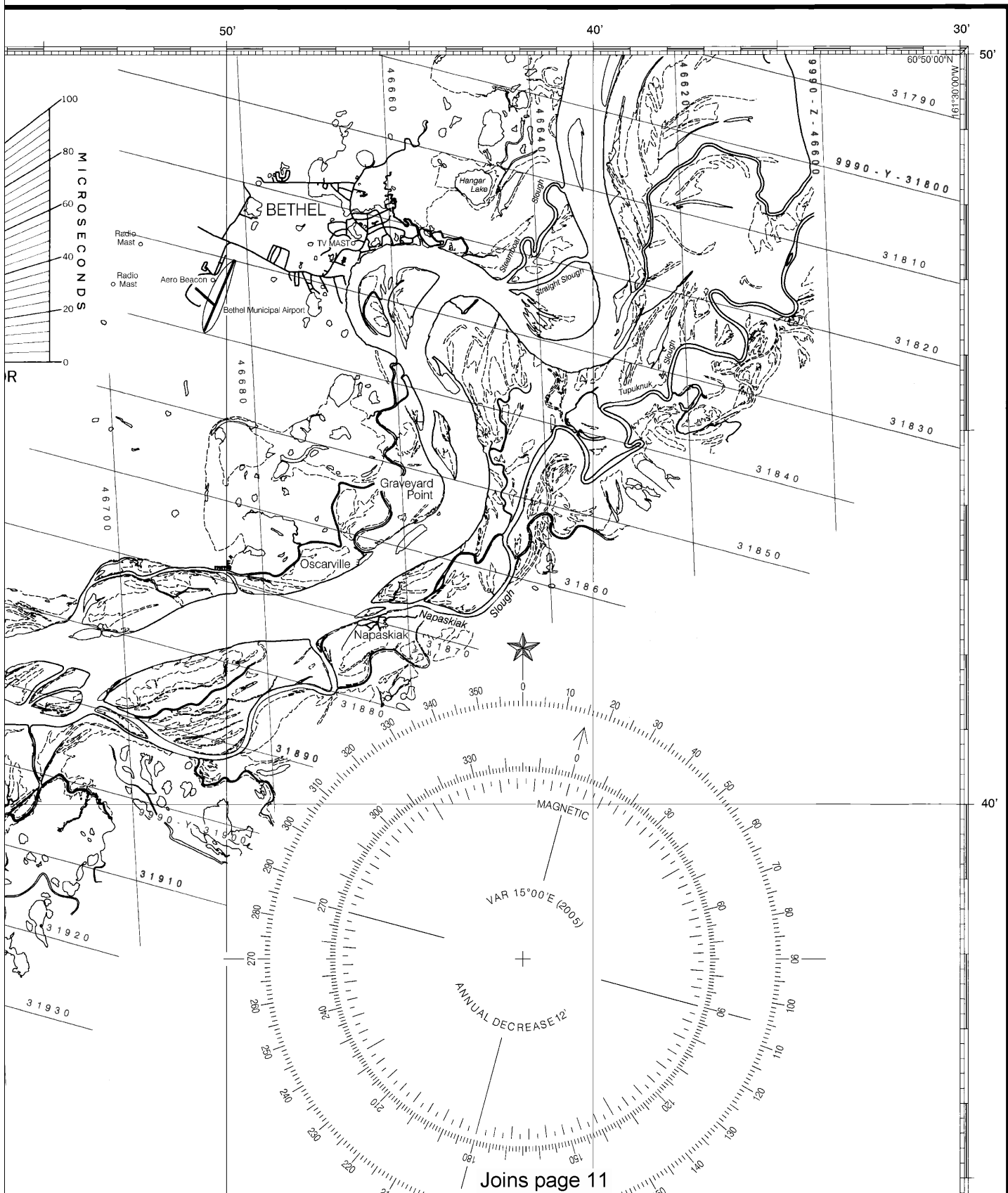
SCALE 1:100,000
Nautical Miles

See Note on page 5.



PRINT-ON-DEMAND CHARTS

This chart is available in a version updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-6 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts.



Joins page 11

16304

LORAN-C OVERPRINTED

This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4812 11/27/2012,
 NGA Weekly Notice to Mariners: 4812 12/1/2012,
 Canadian Coast Guard Notice to Mariners: 0912 9/28/2012.

7

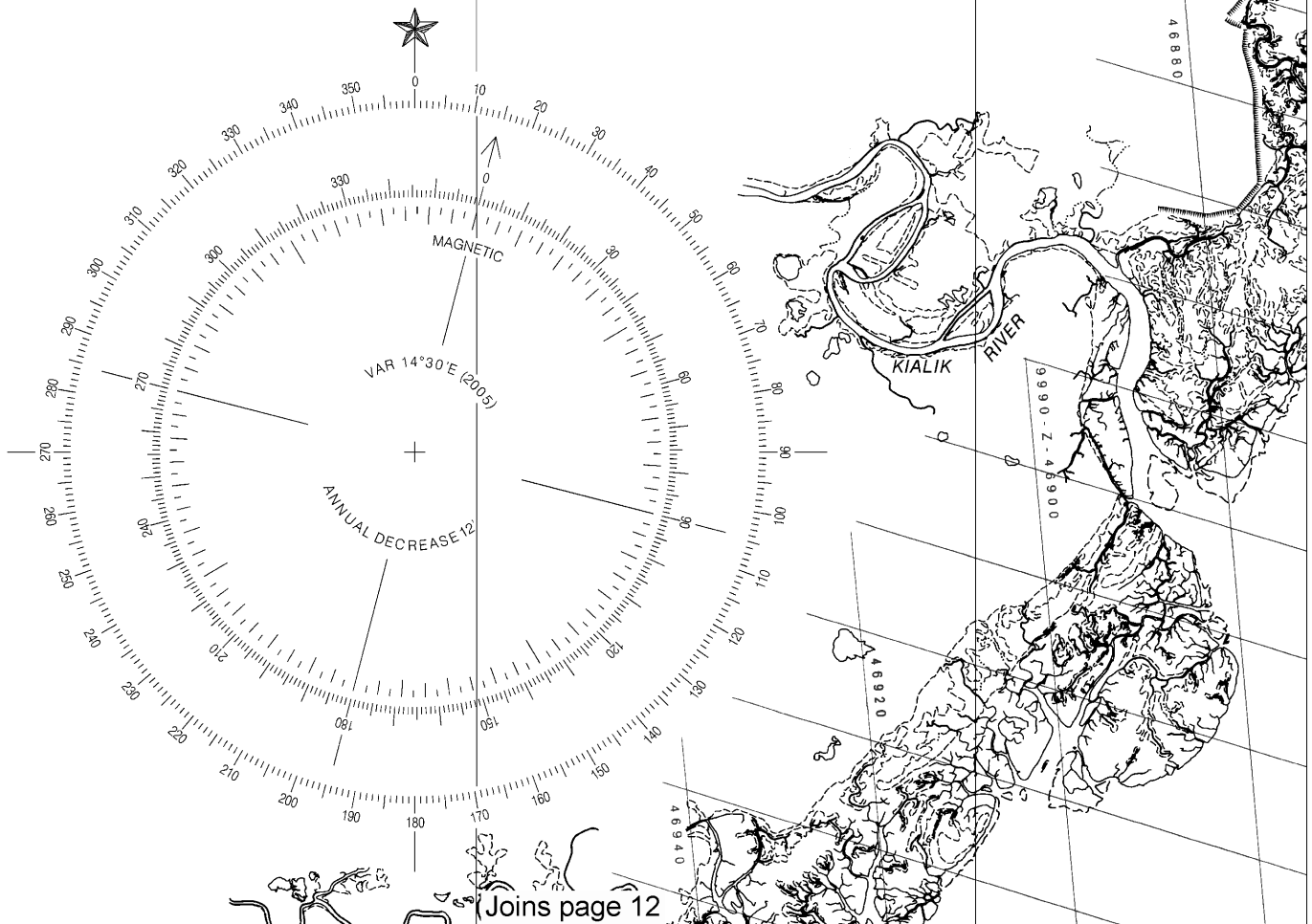
Joins page 4

ances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

30'



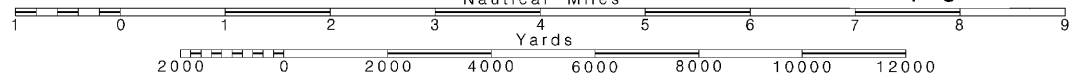
8

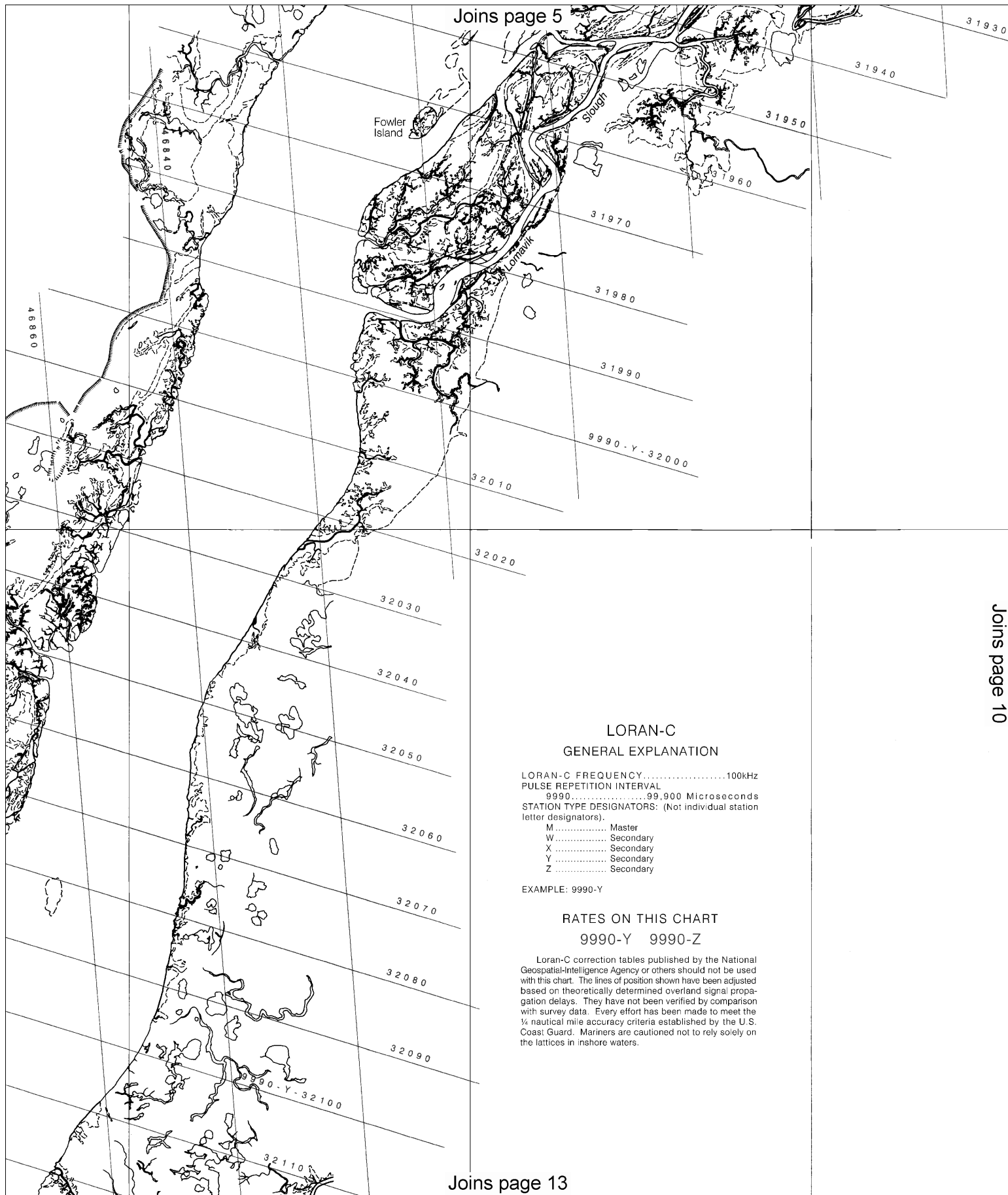
Note: Chart grid lines are aligned with true north.

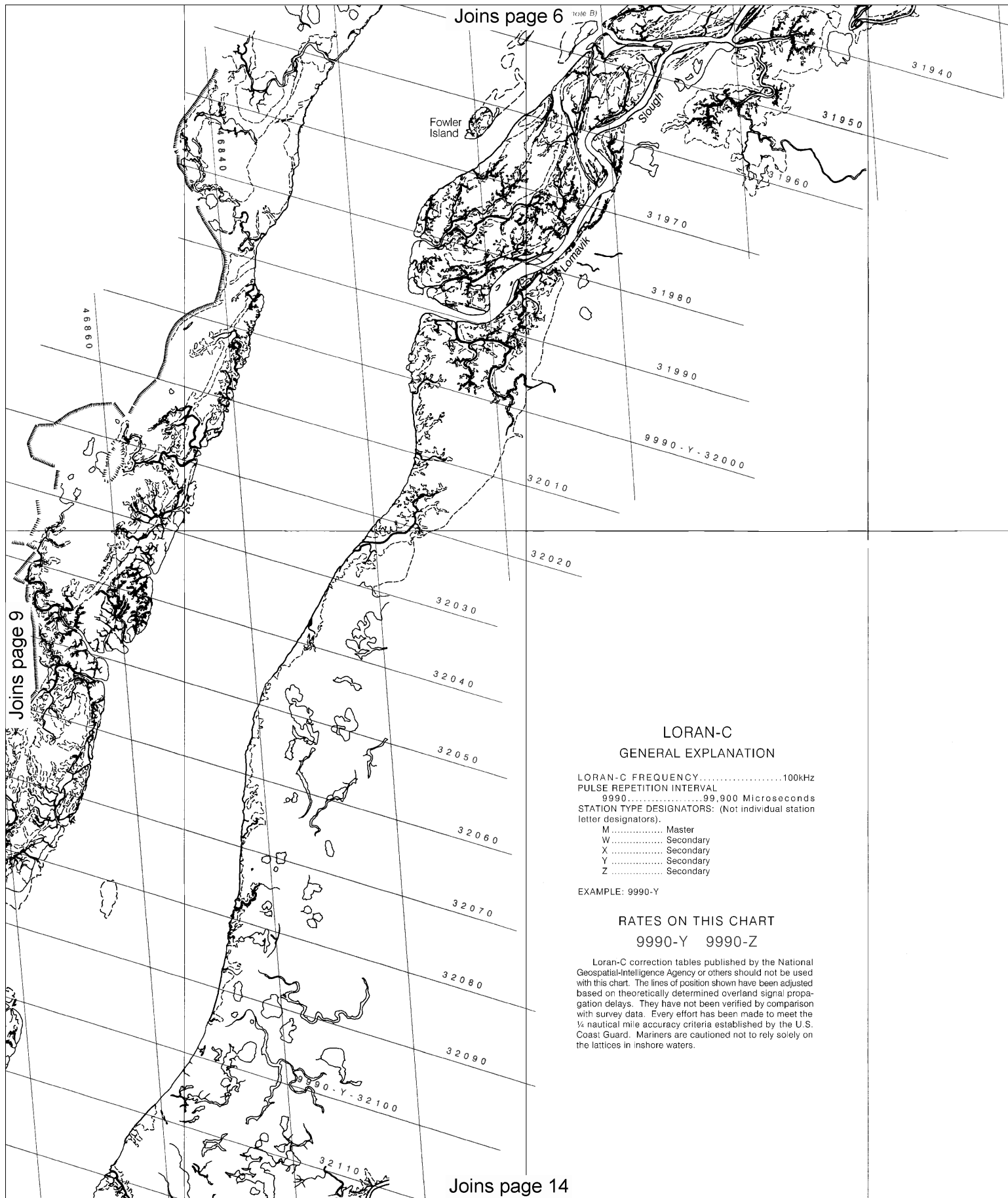
Printed at reduced scale.

SCALE 1:100,000
Nautical Miles

See Note on page 5.







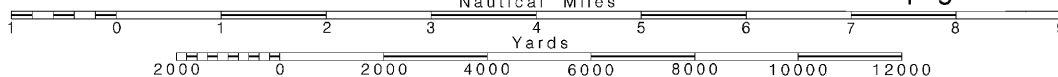
10

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:100,000

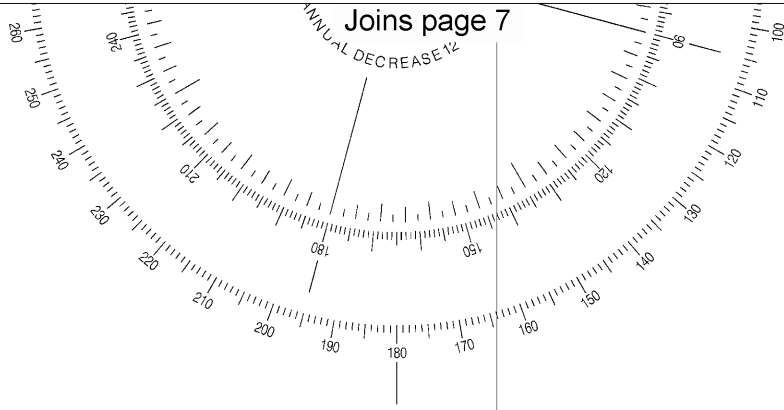
See Note on page 5.



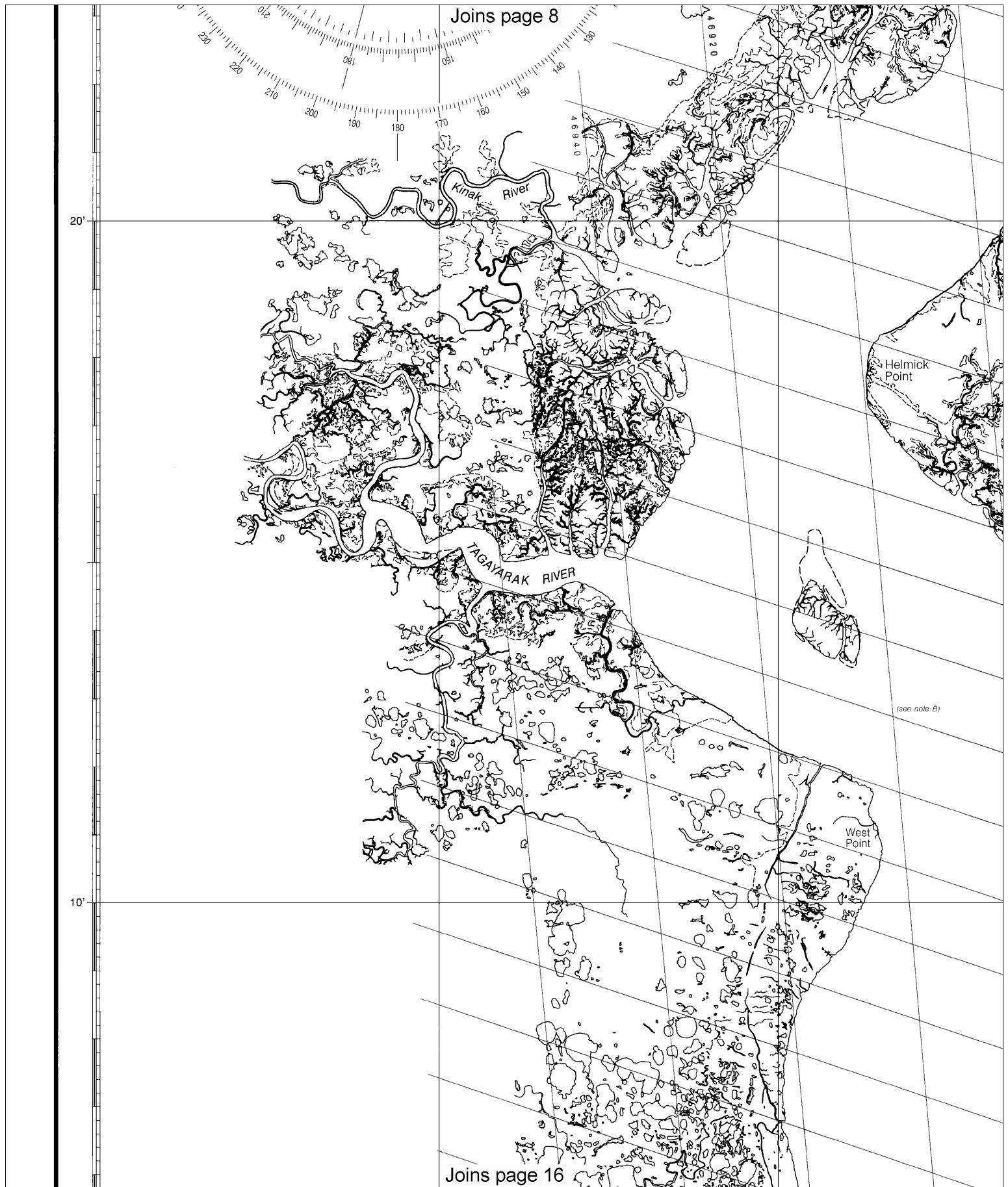
3 1 9 3 0

Joins page 7

ANNUAL DECREASE 1/2



Joins page 15

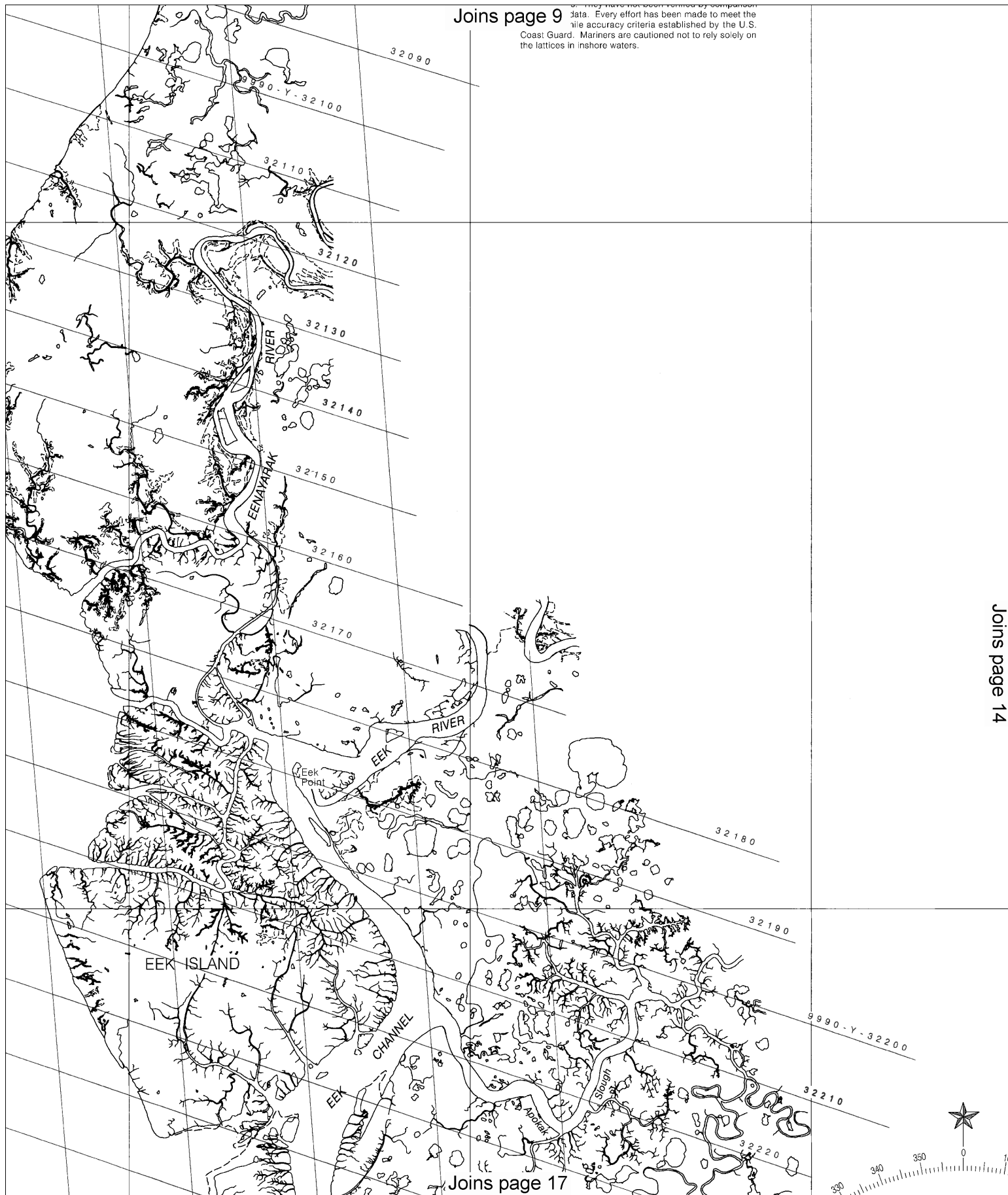


Note: Chart grid lines are aligned with true north.

See Note on page 5.

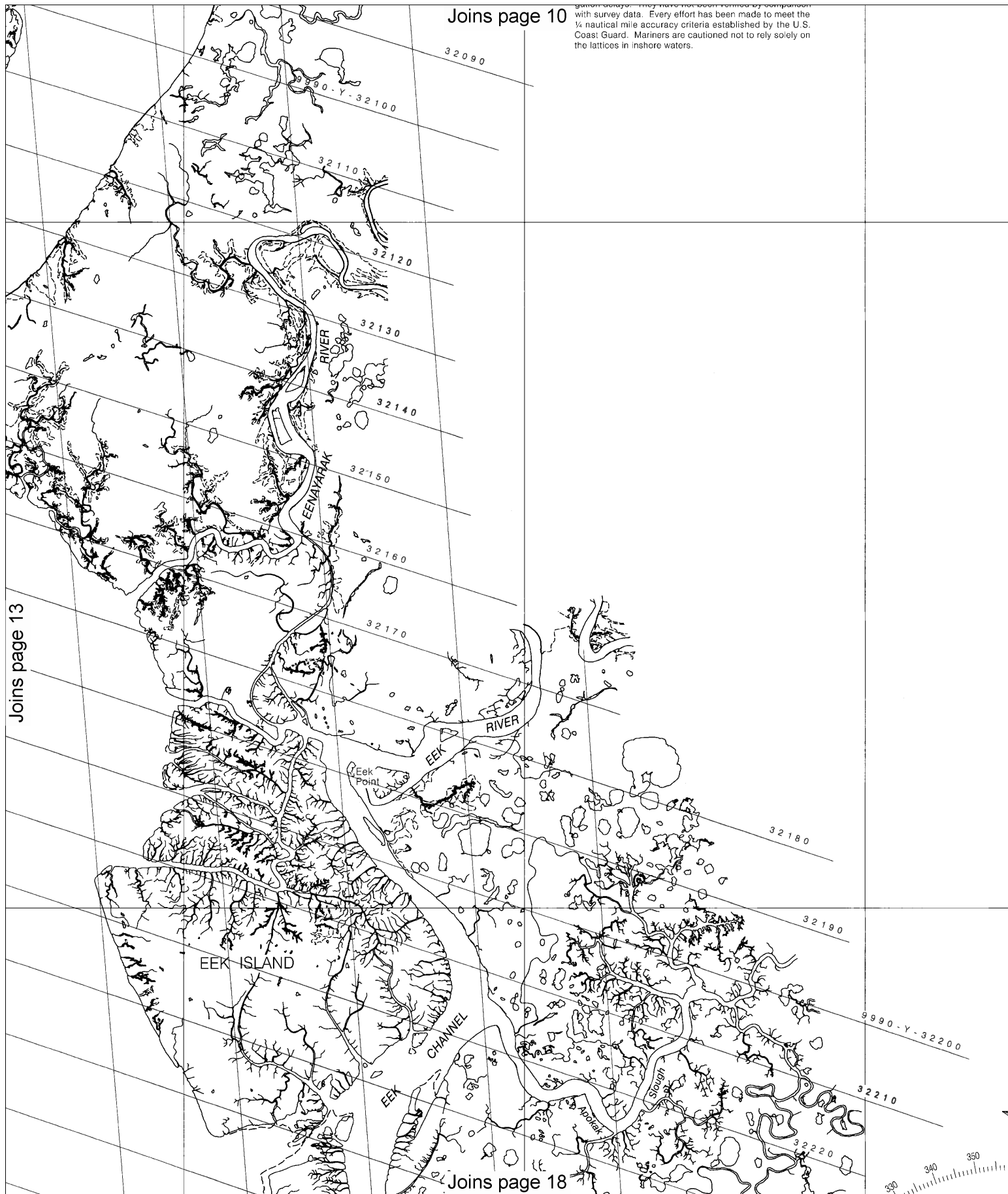
Joins page 9

of any data not been verified by comparison
data. Every effort has been made to meet the
the accuracy criteria established by the U.S.
Coast Guard. Mariners are cautioned not to rely solely on
the lattices in inshore waters.



Joins page 17

Joins page 14



Joins page 10

This chart has been corrected by comparison with survey data. Every effort has been made to meet the 1/4 nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned not to rely solely on the lattices in inshore waters.

Joins page 13

Joins page 18

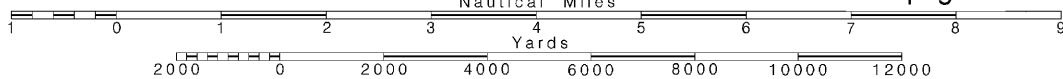
14

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

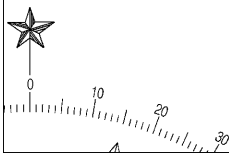
SCALE 1:100,000

See Note on page 5.



20'

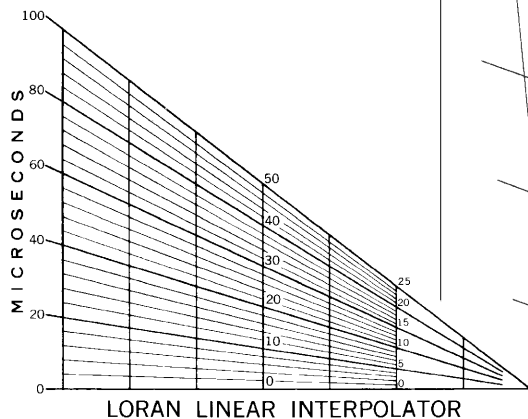
10'



Joins page 12

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE B
The deep draft channel from Kuskokwim Bay Buoy 12 (59°53'42"N., 162°15'22"W.) northward to Johnson River is marked by about 30 red or green oil drum buoys during the season of navigation.



KUSKOK

2nd Ed. Jan./05 ■ Corrected through NM Jan. 15/05
Corrected through LNM Jan. 4/05

16304

LORAN-C OVERPRINTED

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

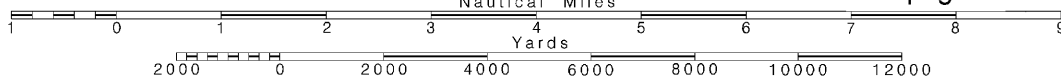
16

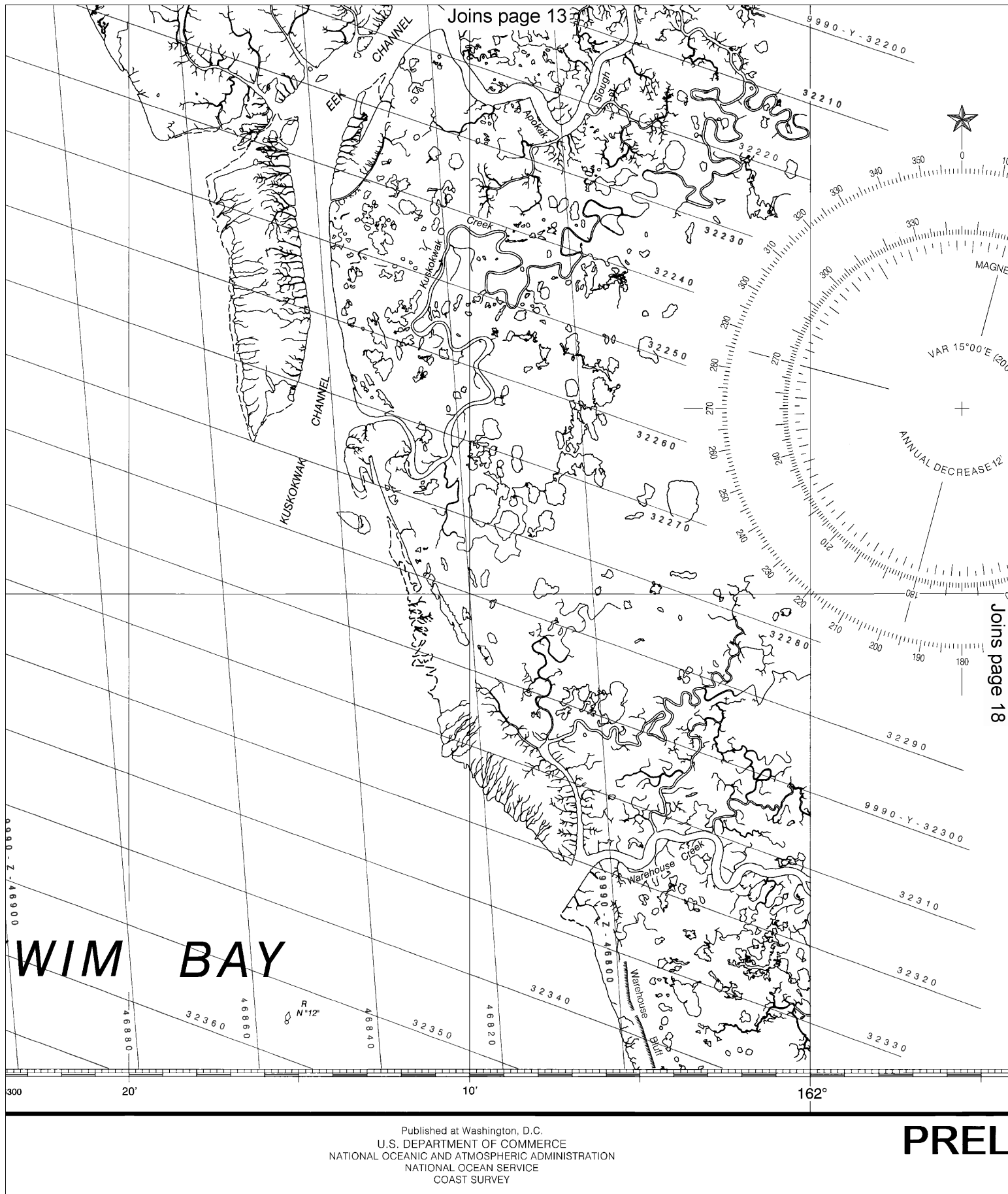
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:100,000

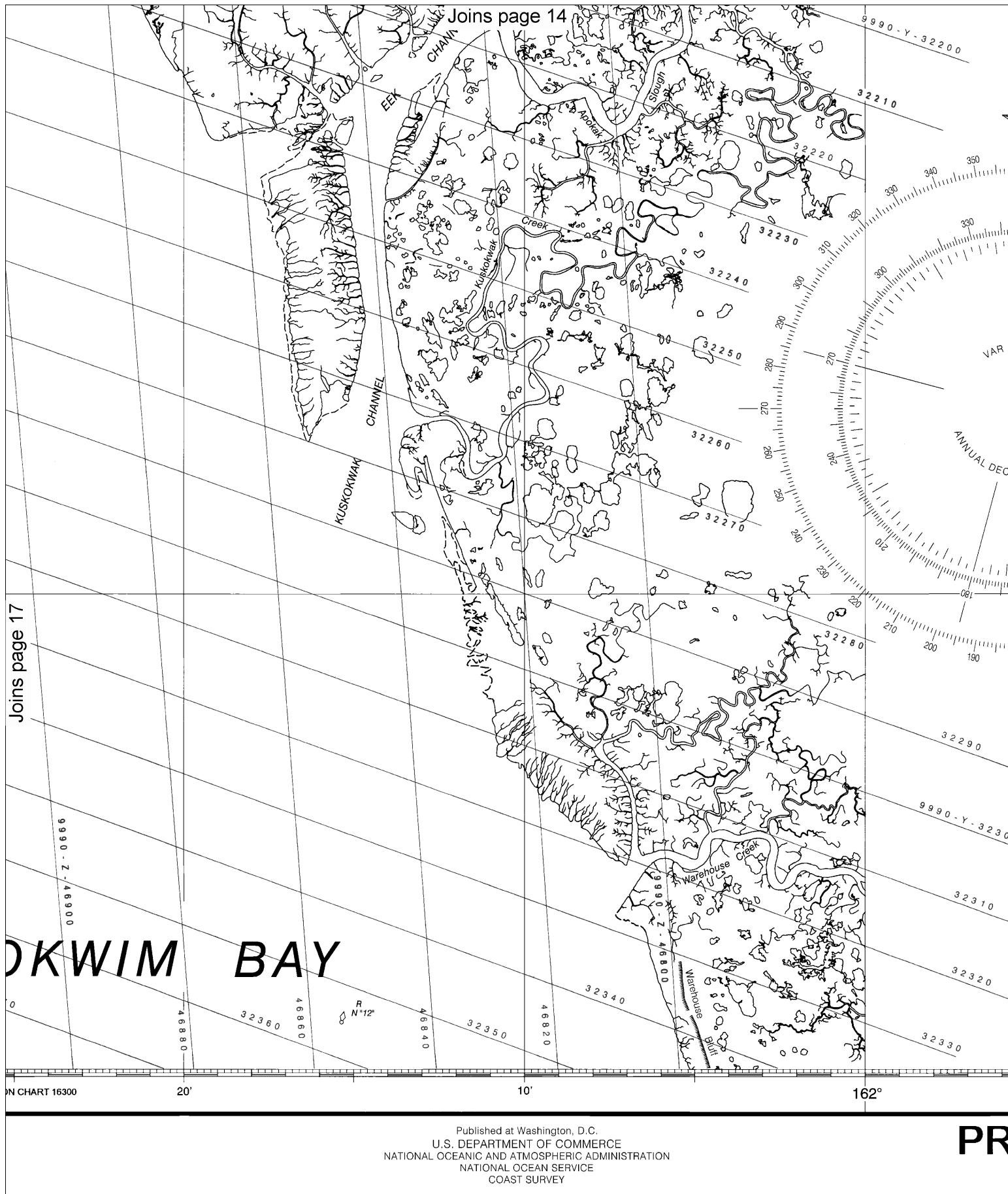
See Note on page 5.





Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

PREL

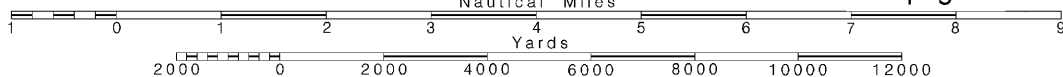


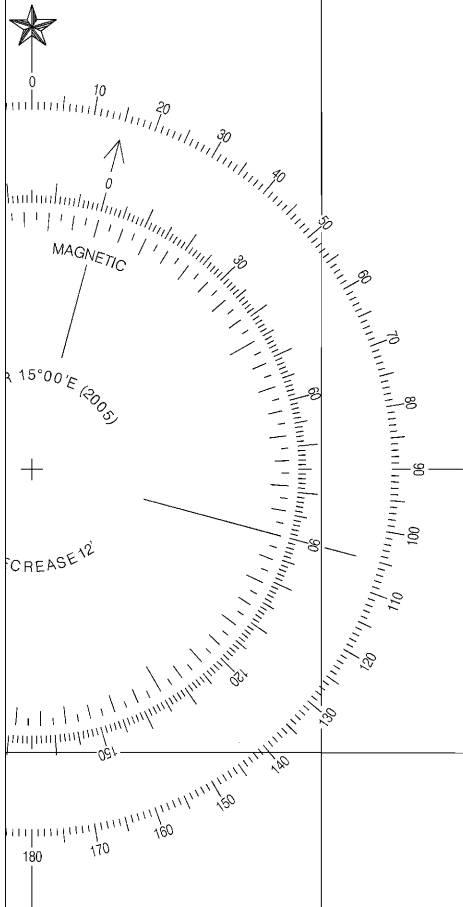
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:100,000

See Note on page 5.





NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers.

WARNING

PRELIMINARY CHART 2005 EDITION

Hydrography for this preliminary chart is not available. Navigators should use this chart with extreme caution and report discrepancies or hazards to the Chief, Marine chart Division N/CS2, National Ocean Service NOAA, Silver Spring, Maryland 20910-3282.

50'

40'

1088.6mm x 736.0mm

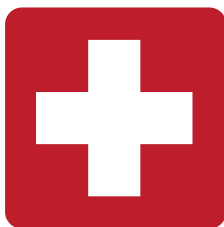
30'

PRELIMINARY CHART
2005 EDITION

Kuskokwim Bay to Bethel
SCALE 1:100,000

16304
LORAN-C OVERPRINTED





EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

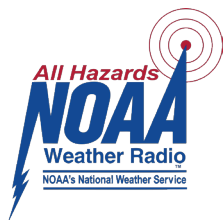
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Online chart viewer	—	http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



— For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey



The Nation's Chartmaker